UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
AFSHAR, KAMRAN

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>28 May 2009</u>.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-18</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) <u>1-18</u> is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.
4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on

05/28/2009 has been entered.

Response to Arguments

2.   Applicant's arguments filed on 05/28/2009 have been fully considered but they

are not persuasive.

Double Patenting Rejection:

        Applicant requests that the provisional rejection be held in abeyance until the present application

or the co-pending application is in condition for allowance and the claims are in final form.

        In response to applicant's argument: Applicant request is respectfully is declined till Applicant can

make proper determination whether the other applications improperly seek to extend the Applicant's

rights. Therefore, the previous rejection is maintained.

Claim Rejection Under *35 USC § 102(e)*

        In response to applicant's argument that the reference **Liu** (U.S. Pub. No.: 2004/0190467 A1) fail

to show certain features of applicant's invention (i.e. dynamically control a power state of the at least one

wireless terminal on the basis of the at least one parameter describing the data traffic pattern of the

terminal and by the terminal the beacon interval information to maintain the at least one wireless terminal

in one of at least two power states), Examiner very kindly directs the Applicant to the controller (See Lie

e.g. controller 23, 26a of Fig. 2) that controls the operation of the subsystems of the device or the terminal

or the system (i.e. transmit, receive, power save, sleep, awake, etc., HCF, Page 4, ¶ [0060]). Further, Lie

teaches dynamically controlling (See Liu e.g. dynamically adjusted to schedule wake-up time, Page 4, ¶

[0045]) a power state of the terminal by the terminal (See Lie e.g. 28 controls (which is part of 23 of Fig.

2, Page 2, ¶ [0016]) so that the terminal is maintained in one of at least two power states (See Liu e.g.

station can remain asleep , wake up (or awaken or active), Page 4, Lines 3-7 of ¶ [0046]), on the basis of

the at least one parameter (See e.g. based on one or a combination of network (packet size or data

length), network traffic, traffic buffering time, data priorities, and data rate, etc., Page 4, Lines 6-8 of ¶

[0045]) describing the data traffic patter of the terminal and beacon interval information (See Lie e.g.

Schedule Information Vector (SIV) power saving traffic, schedules information or time, etc. Page 4, Lines

2-7 of ¶ [0046]). Further, contrary to applicant assertion, Examiner still believes that element 28 is the

controlling element which is part of element 23 of Fig. 2 that includes element 26 a (MAC) and controls

the operation of the device, and /or HCF which controls the operation of the terminal or the AP as

depicted in Fig. 3).

**Applicant(s) are reminded that the Examiner is entitled to give the broadest reasonable
interpretation to the language of the claim. The Examiner is not limited to Applicant's definition,
which is not specifically set fourth in the claims, *In re Tanaka et aL,* 193 USPQ 139, (CCPA) 1977.
Therefore, the previous rejection is maintained.**

Double Patenting

1.   The nonstatutory double patenting rejection is based on a judicially created
doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the
unjustified or improper timewise extension of the "right to exclude" granted by a patent
and to prevent possible harassment by multiple assignees.   A nonstatutory
obviousness-type double patenting rejection is appropriate where the conflicting claims
are not identical, but at least one examined application claim is not patentably distinct
from the reference claim(s) because the examined application claim is either anticipated
by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140
F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29
USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir.
1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422

F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

     A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

     Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2.   Claims 1-17 are provisionally rejected on the ground of nonstatutory

obviousness-type double patenting as being unpatentable over claims 1-19 of

copending Application No. 11/630,159. Although the conflicting claims are not identical,

they are not patentably distinct from each other because all the claimed limitations

recited in the present application are transparently found in the copending application

11/630,159 with obvious wording variations. Take an example of comparing claim 1 of

pending application and claims 1 of copending application 11/630,159:

Pending Application 10/555,107	Co-pending application 11/630,159
1. A method comprising: <u>receiving beacon</u> frames at beacon intervals; extracting beacon interval information from a beacon frame; monitoring a data traffic of a terminal; defining at least one parameter describing a data traffic; and, dynamically controlling <u>a power state of the terminal by the terminal, on the basis of said at least one parameter describing the data traffic pattern of the terminal and beacon interval information,</u> so that the terminal is maintained in one of at least <u>two power states</u>, wherein said at least two power states comprise an active state and a <u>power save state</u>.	1. A method for controlling <u>a short-range wireless terminal</u> capable of operating in a first <u>beacon-based</u> network and in a second beacon-based network, the method comprising the steps of: controlling the <u>short-range wireless terminal</u> to <u>enter a power save state</u> with respect to a <u>first beacon-based</u> network; and starting operation in a second beacon-based network in response to the controlling step, wherein the controlling step is performed if the short-range wireless terminal is in an <u>active operation state</u> with respect to the first beacon-based network when the operation in the second beacon-based network is to be started.

The claims of the application 11/630,159 encompass the same subject matter except the instant application "**dynamically controlling a power state of the terminal by the terminal, on the basis of said at least one parameter describing the data traffic pattern of the terminal and beacon interval information**" whereas the copending Application 11/630,159 claims are to "**controlling the short-range wireless terminal to enter a power save state with respect to a first beacon-based network**". Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention to implement the copending Application 11/630,159 "**controlling the short-range wireless terminal to enter a power save state with respect to a first beacon-based network**" as a "**dynamically controlling a power state of the terminal by the terminal , on the basis of said at least one parameter describing the data traffic pattern of the terminal and beacon interval information**" because it was notoriously well known to utilize method and or a system of saving power in a wireless network comprising an access point, one or more stations, utilizing beacon frame, and an algorithm for calculating a transmission time T of downlink data for the stations by calculating the transmission time of data to be downlinked to the stations using the algorithm, determining a priority queue ordering of the transmissions based on the time calculated for each station, scheduling an awakening time in the frame for each PS station based on the transmission order.

Further, the instant claims obviously encompass the claimed invention of 11/630,159 application and differ only in terminology. To the extent that the instant claims are broaden and therefore generic to the claimed invention of 11/630,159 application, in re Goodman 29 USPQ 2d 2010 CAFC 1993, states that a generic claim cannot be issued without a terminal disclaimer, if a species claim has been previously been claimed in a co-pending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by
another filed in the United States before the invention by the applicant for patent or (2) a patent
granted on an application for patent by another filed in the United States before the invention by the
applicant for patent, except that an international application filed under the treaty defined in section
351(a) shall have the effects for purposes of this subsection of an application filed in the United States
only if the international application designated the United States and was published under Article 21(2)
of such treaty in the English language.

4.   Claims 1-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Liu

(U.S. Pub. No.: 2004/0190467 A1).

With respect to claim 1, 10, 14, 18, **Liu** teaches A system (See Liu e.g. WLAN network of Fig. 1,

Page 1, ¶ [0008])/ or An apparatus (See Liu e.g. STA, mobile or portable, Page 1, Lines 1-5 of ¶ [0005])

and or A method comprising: a receiver / receiving beacon frames at beacon intervals (See

Liu e.g. transceiver 20 of Fig. 2, The AP 120 may further comprise a transceiver having

a receiver section and a transmitter section, receive / transmit packet data, Page 3, ¶ [0042]) exchange

message (beacon at fixed interval), station listens for beacon message, or station receives beacon frame

(or message), Page 1, ¶ [0013]); and extractor to extract / extracting beacon interval information from a

beacon frame (See Liu e.g. data received, extracted, beacon, 140b, TIM, schedule information, Page 3,

Lines 1-9 of ¶ [0043]); a traffic monitor configured to / monitoring data traffic of a terminal (See Liu e.g.

awaking at periodic time to monitor an SIV and AID, Page 3, Lines 4-6 of ¶ [0030], beacon includes the

TIM comprising the AID and SIV frame protocol. In response 420, STA1 finds its AID is indicated in the

TIM to receive data from the AP, so STA1 remains awake, Page 6, ¶ [0087]); defining at least one

parameter describing a data traffic pattern of the terminal (See Liu e.g. frame body having various

parameter, Page 5 ¶ [0070], Figs. 6A-6C) by the terminal (See Lie e.g. 28 controls (which is part of 23 of

Fig. 2, Page 2, ¶ [0016], element 28 is the controlling element which is part of element 23 of Fig. 2 that

includes element 26 a (MAC) and controls the operation of the device, and /or HCF which controls the

operation of the terminal or the AP as depicted in Fig. 3); and a controller configured to manage power

(See Lie e.g. controller 28 of Fig. 2) for dynamically controlling (See Liu e.g. dynamically adjusted to

schedule wake-up time, Page 4, ¶ [0045]) a power state of the terminal so that the terminal is maintained

in one of at least two power states (See Liu e.g. station can remain asleep , wake up (or awaken or active), Page 4, Lines 3-7 of ¶ [0046]), on the basis of the at least one parameter (See e.g. based on one or a combination of network (packet size or data length), network traffic, traffic buffering time, data priorities, and data rate, etc., Page 4, Lines 6-8 of ¶ [0045]) describing the data traffic patter of the terminal and beacon interval information (See Lie e.g. Schedule Information Vector (SIV) power saving traffic, schedules information or time, etc. Page 4, Lines 2-7 of ¶ [0046]), wherein the at least two power states comprise an active state and a power save state (See Liu e.g. employing power saving technique, Page 2, ¶ [0019], power saving, sleep and awaking (or active sate or mode), Page 3, ¶ [0030]).

Regarding claims 2, 11, 17, Liu teaches the monitoring (See Liu e.g. awaking at periodic time to monitor an SIV and AID, Page 3, Lines 4-6 of ¶ [0030]) comprise monitoring packet sizes and packet intervals of the data traffic (See e.g. based on one or a combination of network (packet size or data length), network traffic, traffic buffering time, data priorities, and data rate, etc., Page 4, Lines 6-8 of ¶ [0045], interval or scheduling information, Page 4, Lines 2-7 of ¶ [0046]).

Regarding claim 3, Liu teaches at least one parameter describes packet sizes and packet intervals (See data length, traffic, etc., Page 4, Lines 6-8 of ¶ [0045]).

Regarding claim 4, Liu teaches the controlling determining a sleep interval defining the time periods when the power save state is possible (See Liu e.g. sleep mode until, determine schedule time, Page7, ¶ [0099]).

Regarding claim 5, Liu teaches the determining comprises determining parameters indicating a timing, a length and a frequency of the sleep interval (See Liu e.g. station enters sleep mode, at the later specified time, Page 6, Lines 1-2 of ¶ [0085], to monitor the channel, Page 5, ¶ [0065]).

Regarding claim 6, Liu teaches the step of supplying additional (inherently) input data including at least one requirement parameter describing requirements set by an application, active in the terminal, for the controlling (See Liu e.g. QoS requirements, Multimedia, Page 1, ¶ [0004], requirements, application, Page ¶ [0065]) the power stat of the terminal (See Liu e.g. sleep mode until, determine schedule time, Page7, ¶ [0099]).

Regarding claim 7, Liu teaches at least one requirement parameter indicates the maximum period that the terminal may continuously be in the power save state (See Liu e.g. station enters sleep mode, at the later specified time, Page 6, Lines 1-2 of ¶ [0085]).

Regarding claim 8 Liu teaches at least one requirement parameter indicates the quality of service (QoS) level required by the application (See Liu e.g. QoS requirements, Multimedia, Page 1, ¶ [0004], requirements, application, QoS, Page ¶ [0065]).

Regarding claim 9, Liu teaches the step of mapping the quality of service level to input parameters for the controlling step (See Liu e.g. TIM of the beacon, Page 7, ¶ [0098], beacon frame schedule , schedule power saving, subject to QoS requirements, Page 6, Lines 1-2 of ¶ [0083]).

Regarding claim 12, Liu teaches the controller (inherently) comprise an interface configured to control applications residing in the terminal (See Liu e.g. PS method 905 - 940 of Fig. 7), and to receive additional input data from an application (See Liu e.g. QoS requirements , Multimedia, Page 1, ¶ [0004], requirements, application, Page ¶ [0065]), and wherein the additional input data comprising at least one requirement parameter describing requirements set by the controller (See Liu e.g. PS method 905 - 940 of Fig. 7).

Regarding claims 13, 15, Liu teaches the terminal is a wireless area network terminal or at least system entity is a wireless terminal (See Liu e.g. WLAN, STA, mobile or portable, Page 1, Lines 1-5 of ¶ [0005]).

Regarding claim 16, wherein said at least system entity is an access point connected to a wired network (See Liu e.g. access point, WLAN, STA, mobile or portable, Page 1, Lines 1-5 of ¶ [0005], wired or wireless network, Page 1, ¶ [0008]).

Conclusion

5.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Beach (U.S. 6, 067, 297 A).

b) Beach (U.S. 7, 126, 945 B2).

c) Van Bokhorst (U.S. RE40, 32 E).

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Kamran Afshar whose telephone number is (571) 272-7796. The examiner can be reached on Monday-Friday.

If attempts to reach the examiner by the telephone are unsuccessful, the examiner's supervisor, **Eng, George** can be reached @ (571) 272-7495. The fax number for the organization where this application or proceeding is assigned is **571-273-8300** for all communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Kamran Afshar/

Primary Examiner, Art Unit 2617